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Outbreaks of norovirus infection are more likely to occur during winter months within institutions such as residential facilities, hospitals, long-term care facilities, schools, and child care settings. The virus is easily spread from person-to-person through direct contact, contact with contaminated surfaces, and ingestion of contaminated food. This information is provided by Contra Costa County Communicable Disease Control to assist with the recognition and control of norovirus infections in schools and child care facilities.

The typical symptoms of norovirus are nausea, vomiting, low-grade fever, abdominal cramps, and watery, non-bloody diarrhea. Vomiting is more common in children. Symptoms usually develop within 24 to 48 hours after exposure, but can appear as early as 12 hours. Illness typically lasts 12 to 60 hours and usually will resolve on its own.

Norovirus is spread very easily from person to person, and people can become infected with the virus in several ways, including:

- Eating food or drinking liquids that are contaminated with norovirus.

- Touching surfaces or objects contaminated with norovirus, and then eating or placing their hand in their mouth

The virus can persist on surfaces in the environment for weeks and is not destroyed by many disinfecting products. When an individual with norovirus handles or prepares food and drinks improperly, they can contaminate those items and can cause infections in people who consume those products; therefore, foodworkers with diarrhea or vomiting should not work until at least 48 hours after their symptoms have stopped.

Re-infection can occur multiple times during a lifetime. An outbreak of norovirus infection is suspected when



Effective handwashing technique:

Lather hands with soap and warm water for 20 seconds,

Scrub entire hands including beneath fingernails,

Rinse hands well with warm running water, and

Dry hands with disposable paper towel or under air dryer.

Adults should observe younger children washing hands after using the toilet and before eating.

Each sink should be supplied with soap and access to paper towels.

Educate students and staff about good hand washing techniques.

If water and soap are not available, use an alcohol-based hand sanitizer with at least 60% alcohol, although this is not as effective as soap and water.

Post signage to remind all persons in the facility to practice frequent hand washing.

Persons cleaning areas that are heavily contaminated with vomit or feces should wear disposable gloves and face masks.

Clean up vomit and fecal spillages promptly and carefully so that the release of virus into the air is minimized. Properly dispose of vomit or feces in a toilet and disinfect the surrounding area with a bleach-based cleaner (see next page for cleaning and disinfecting).

If it is possible, immediately remove and wash clothing or linens that may be contaminated with vomit or feces. Handle soiled items as little as possible, without agitating them. Launder with an approved detergent in hot water 160°F for 25 minutes. Dry in hot dryer if fabric allows. If laundry is not done at your facility, place soiled linens in a plastic bag and seal or tie the bag.

Any staff member, including kitchen staff, with symptoms of norovirus infection, should be sent home and must not return until they are no longer symptomatic for 48 hours.

Symptomatic food handlers must not prepare or serve food for others under any circumstances.

Staff who interact with or assist sick students or clean up vomit or feces must wash hands thoroughly after each encounter.

Administrative or student health staff at the school should track the number of ill students and staff.

Post hand hygiene signage in the bathrooms for students and staff.

Cancel or postpone group activities (i.e. outings, field trips, parties, etc.) until the outbreak is over.

Maintain the same staff to assigned classrooms to limit the spread of infection. Floating staff should be assigned exclusively to either well or sick classrooms until the outbreak is over.

Non-essential staff and parents should not visit the school until the outbreak is over.

Any student with symptoms of norovirus infection should be sent home and must not return until they are no longer symptomatic for 48 hours.

Students must wash their hands thoroughly after using the bathroom and before eating.

During an outbreak, routine classroom, bathroom, and toilet cleaning should occur with increased frequency, especially common-use bathrooms.

Before the disinfection process:

Spot test disinfectant solutions; disinfectants can discolor or corrode surfaces.

Protect yourself from norovirus aerosols and disinfectant by wearing personal protective equipment (PPE): disposable gloves, facemask, eye protection, and disposable gown if available.

After cleaning, disinfect with diluted chlorine bleach or a U.S. Environmental Protection Agency (EPA)-approved disinfectant. Fresh bleach solutions should be prepared daily, as potency is quickly lost.

(parts per million) - 1:250 dilution

1 Tablespoon of bleach in 1-gallon water

(parts per million) - 1:50 dilution

1/3-cup bleach in 1-gallon water

(parts per million) - 1:10 dilution

1 and 1/2 cup bleach in 1-gallon water

Phenolic-